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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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Ex parte CORVILLE O. ALLEN, ROBERTO DELIMA,
AYSU EZEN CAN, and ROBERT C. SIZEMORE

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Appeal 2019-002768
Application 15/263,889
Technology Center 2600

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Before JOHN A. EVANS, JASON J. CHUNG, and
CARL L. SILVERMAN, *Administrative Patent Judges*.

CHUNG, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant[1] appeals the Final Rejection
of claims 1–8, 11–18, and 20–23.[2] We have jurisdiction under 35 U.S.C.
§ 6(b).

We AFFIRM.

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[1] We use the word "Appellant" to refer to "applicant" as defined in
37 C.F.R. § 1.42. According to Appellant, International Business Machines
Corporation is the real party in interest. Appeal Br. 2.
[2] According to the claim listings filed on February 26, 2018, claims 9,10 and
19 are cancelled.

INVENTION

The invention relates to providing a hybrid approach to handling hypothetical statements in texts. Spec. ¶ 1. Claim 1 is illustrative of the invention and is reproduced below:

1. A method, in a data processing system comprising at least one processor and at least one memory, the at least one memory comprising instructions which are executed by the at least one processor and specifically configure the processor to perform the method, wherein the method comprises:

receiving, by the data processing system, *natural language content*;

analyzing, by the data processing system, *the natural language content to generate a parse tree data structure stored* in the at least one memory of the data processing, system;

processing, by the data processing system, *the stored parse tree data structure to identify one or more instances of hypothetical spans in the natural language content represented by the stored parse tree data structure, wherein hypothetical spans are terms or phrases indicative of a hypothetical statement*; and

performing, by the data processing system, *an operation based on the natural language content and the identified one or more instances of hypothetical spans in the natural language content, wherein the operation is performed with portions of the natural language content corresponding to the one or more identified instances of hypothetical spans within portions of the natural language content being given different relative weights in a function performed by the operation than other portions of the natural language content that do not have one or more identified instances of hypothetical spans, wherein processing the stored parse tree data structure further comprises*:

processing the parse tree data structure to identity instances of factual triggers, wherein factual triggers are terms or phrases indicative of a factual statement;

determining if a factual sub-tree, associated with a factual trigger, is present within a hypothetical sub-tree; and

in response to the factual sub-tree being present within a

> *hypothetical sub-tree, removing the factual sub-tree from the hypothetical sub-tree to generate a modified hypothetical sub-tree prior to further processing of the modified hypothetical sub-tree.*

Appeal Br. 30–31 (Claims Appendix) (emphases added).

REJECTION

The Examiner rejects claims 1–8, 11–18, and 20–23 under 35 U.S.C. § 101 as being directed to patent ineligible subject matter. Final Act. 3–4.[3]

ANALYSIS

A.   *Principles of Law*

An invention is patent-eligible if it claims a "new and useful process, machine, manufacture, or composition of matter." 35 U.S.C. § 101. However, the U.S. Supreme Court has long interpreted 35 U.S.C. § 101 to include implicit exceptions: "[l]aws of nature, natural phenomena, and abstract ideas" are not patentable. *E.g.*, *Alice Corp. v. CLS Bank Int'l*, 573 U.S. 208, 216 (2014).

In determining whether a claim falls within an excluded category, we are guided by the Court's two-part framework, described in *Mayo* and *Alice*. *Id.* at 217–18 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 75–77 (2012)). In accordance with that framework, we first determine what concept the claim is "directed to." *See Alice*, 573 U.S. at 219 ("On their face, the claims before us are drawn to the concept of

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[3] Although the Examiner states claims 1–20 are rejected under 35 U.S.C. § 101, we construe this as a typographical error because claims 9, 10, and 19 are cancelled according to the claim listings filed on February 26, 2018. We, therefore, refer to this rejection as claims 1–8, 11–18, and 20–23 rejected under 35 U.S.C. § 101.

intermediated settlement, *i.e.*, the use of a third party to mitigate settlement risk."); *see also Bilski v. Kappos*, 561 U.S. 593, 611 (2010) ("Claims 1 and 4 in petitioners' application explain the basic concept of hedging, or protecting against risk.").

Concepts determined to be abstract ideas, and thus patent ineligible, include certain methods of organizing human activity, such as fundamental economic practices (*Alice*, 573 U.S. at 219–20; *Bilski*, 561 U.S. at 611); mathematical formulas (*Parker v. Flook*, 437 U.S. 584, 594–95 (1978)); and mental processes (*Gottschalk v. Benson*, 409 U.S. 63, 67 (1972)). Concepts determined to be patent eligible include physical and chemical processes, such as "molding rubber products" (*Diamond v. Diehr*, 450 U.S. 175, 191 (1981)); "tanning, dyeing, making waterproof cloth, vulcanizing India rubber, smelting ores" (*id.* at 182 n.7 (quoting *Corning v. Burden*, 56 U.S. 252, 267–68 (1853))); and manufacturing flour (*Benson*, 409 U.S. at 69 (citing *Cochrane v. Deener*, 94 U.S. 780, 785 (1876))).

In *Diehr*, the claim at issue recited a mathematical formula, but the Court held that "a claim drawn to subject matter otherwise statutory does not become nonstatutory simply because it uses a mathematical formula." *Diehr*, 450 U.S. at 187; *see also id.* at 191 ("We view respondents' claims as nothing more than a process for molding rubber products and not as an attempt to patent a mathematical formula."). Having said that, the Court also indicated that a claim "seeking patent protection for that formula in the abstract . . . is not accorded the protection of our patent laws, and this principle cannot be circumvented by attempting to limit the use of the formula to a particular technological environment." *Id.* (citation omitted) (citing *Benson* and *Flook*); *see, e.g., id.* at 187 ("It is now commonplace that

an *application* of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection.").

If the claim is "directed to" an abstract idea, we turn to the second step of the *Alice* and *Mayo* framework, where "we must examine the elements of the claim to determine whether it contains an 'inventive concept' sufficient to 'transform' the claimed abstract idea into a patent-eligible application." *Alice*, 573 U.S. at 221 (quotation marks omitted). "A claim that recites an abstract idea must include 'additional features' to ensure 'that the [claim] is more than a drafting effort designed to monopolize the [abstract idea].'" *Id.* (alterations in original) (quoting *Mayo*, 566 U.S. at 77). "[M]erely requir[ing] generic computer implementation[] fail[s] to transform that abstract idea into a patent-eligible invention." *Id.*

B.   USPTO Section 101 Guidance

In January 2019, the U.S. Patent and Trademark Office (USPTO) published revised guidance on the application of § 101. 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019) ("2019 Revised Guidance").[4] "All USPTO personnel are, as a matter of internal agency management, expected to follow the guidance." *Id.* at 51; *see also* Update at 1.

Under the 2019 Revised Guidance and the Update, we first look to whether the claim recites:

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[4] In response to received public comments, the Office issued further guidance on October 17, 2019, clarifying the 2019 Revised Guidance. USPTO, *October 2019 Update: Subject Matter Eligibility* (the "Update") (available at https://www.uspto.gov/sites/default/files/documents/peg_oct_2019_update.pdf).

(1) any judicial exceptions, including certain groupings of abstract
ideas (i.e., mathematical concepts, certain methods of organizing
human activity such as a fundamental economic practice, or mental
processes) ("Step 2A, Prong One"); and

(2) additional elements that integrate the judicial exception into a
practical application (*see* MPEP § 2106.05(a)–(c), (e)–(h) (9th ed.
Rev. 08.2017, Jan. 2018)) ("Step 2A, Prong Two").[5]

2019 Revised Guidance, 84 Fed. Reg. at 52–55.

Only if a claim (1) recites a judicial exception and (2) does not
integrate that exception into a practical application, do we then look, under
Step 2B, to whether the claim:

(3) adds a specific limitation beyond the judicial exception that is not
"well-understood, routine, conventional" in the field (*see* MPEP
§ 2106.05(d)); or

(4) simply appends well-understood, routine, conventional activities
previously known to the industry, specified at a high level of
generality, to the judicial exception.

2019 Revised Guidance, 84 Fed. Reg. at 52–56.

    C.   *The Examiner's Rejection and Appellant's Arguments*

The Examiner concludes that the claims recite an abstract idea, specifically
concepts performed in the human mind. Ans. 5; Final Act. 4. The Examiner

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[5] This evaluation is performed by (a) identifying whether there are any
additional elements recited in the claim beyond the judicial exception, and
(b) evaluating those additional elements individually and in combination to
determine whether the claim as a whole integrates the exception into a
practical application. *See* 2019 Revised Guidance - Section III(A)(2), 84
Fed. Reg. 54–55.

also determines the present claims do not amount to significantly more than an abstract idea itself because the abstract idea is implemented using additional elements that are well-understood, routine, and conventional. Ans. 4 (citing Spec. ¶¶ 33–34).

Appellant argues a human cannot perform the operations recited in the present claims. Appeal Br. 22–23; Reply Br. 3–4. Appellant argues that the present claims recite an improvement to the data processing system by providing different weightings for hypothetical spans and specifically modifying the hypothetical sub-tree to remove any factual sub-tree prior to further processing. Appeal Br. 6–16 (citing *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016); *McRO, Inc. v. Bandai Namco Games Am. Inc.,* 837 F.3d 1299 (Fed. Cir. 2016); *Finjan, Inc. v. Blue Coat Sys., Inc.*, 879 F.3d 1299 (Fed. Cir. 2018); Spec. ¶¶ 24–30); Reply Br. 4–11. Appellant argues that the present claims recite a novel and nonobvious improvement to prior art computer mechanisms. Appeal Br. 8. Appellant argues the present claims are patent eligible because they recite the use of a specific machine that is not present within a general purpose computing device. *Id.*; Reply Br. 7. Appellant argues the present claims do not preempt any abstract idea. Appeal Br. 18; Reply Br. 6. Appellant argues that the Examiner fails to provide sufficient evidence to support the finding that the additional elements implementing the abstract idea are well-understood, routine, and conventional. Appeal Br. 18–19, 21–22 (citing *Berkheimer v. HP Inc.*, 881 F.3d 1360 (Fed. Cir. 2018)); Reply Br. 13. Appellant argues the present claims recite a non-conventional and non-generic arrangement of known, conventional elements, which results in an inventive concept. Appeal Br. 19–21 (citing *BASCOM Global Internet Services, Inc. v. AT&T Mobility*

LLC, 827 F.3d 1341 (Fed. Cir. 2016)). We disagree with Appellant.

D. Step 2A, Prong 1

Patent eligibility under 35 U.S.C. § 101 is a question that we resolve pursuant to the 2019 Revised Guidance. The emphasized portions of claim 1, reproduced above (*see supra* at 2–3), recite concepts performed in the human mind (including an observation, evaluation, judgment, opinion) with the assistance of pen and paper because they require providing different weightings for hypothetical spans and specifically modifying the hypothetical sub-tree to remove any factual sub-tree prior to further processing. *See* 2019 Revised Guidance, 84 Fed. Reg. at 52 n.14. Concepts performed in the human mind (including an observation, evaluation, judgment, opinion) fall into the category of mental processes. *Id.* Mental processes are a type of abstract idea. *Id.*

We, therefore, disagree with Appellant's argument that a human cannot perform the operations recited in the present claims. Appeal Br. 22–23. The additional elements (i.e., the non-emphasized portions of claim 1 recited *supra* at 2–3) are generic computer components for the reasons discussed *infra*.

We must still determine whether the abstract idea is integrated into a practical application, namely whether the claim applies, relies on, or uses the abstract idea in a manner that imposes a meaningful limit on the abstract idea, such that the claim is more than a drafting effort designed to monopolize the abstract idea. *See* 2019 Revised Guidance, 84 Fed. Reg. at 54–55. We therefore (1) identify whether there are any additional recited elements beyond the abstract idea, and (2) evaluate those elements both individually and collectively to determine whether they integrate the

exception into a practical application. *See id.*

Accordingly, we proceed to Prong 2.

E.   Step 2A, Prong 2

Here, the only elements in the claims beyond the abstract idea are "processor,"[6] "data processing system,"[7] "memory," and "computing device."[8] *See* 2019 Revised Guidance, 84 Fed. Reg. at 52. The additional elements of the present claims do not integrate the abstract idea into a practical application because they do not impose any meaningful limits on practicing the abstract idea for the following reasons.

Appellant does not identify persuasively how the Specification sets forth an improvement in technology. The October 2019 Update addresses how we consider evidence of improvement that is presented to us. The Update states

> *the evaluation of Prong Two requires the use of the considerations (e.g. improving technology*, effecting a particular treatment or prophylaxis, implementing with a particular machine, etc.) *identified by the Supreme Court and the Federal Circuit, to ensure that the claim as a whole "integrates [the] judicial exception into a practical application* [that] will apply, rely on, or use the judicial exception in a manner that imposes a meaningful limit on the judicial exception, such that the claim is more than a drafting effort designed to monopolize the judicial exception.

Update 11 (emphases added). The Update further states:

> During examination, the examiner should analyze the "improvements" consideration by evaluating the specification and the claims to ensure that a technical explanation of the

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[6] This additional element appears only in claims 1 and 20. *See* Claims App.

[7] This additional element appears only in claim 1. *See* Claims App.

[8] This additional element appears only in claim 11. *See* Claims App.

asserted improvement is present in the specification, and that the claim reflects the asserted improvement. Generally, examiners are not expected to make a qualitative judgment on the merits of the asserted improvement. *If the examiner concludes the disclosed invention does not improve technology, the burden shifts to applicant to provide persuasive arguments supported by any necessary evidence to demonstrate that one of ordinary skill in the art would understand that the disclosed invention improves technology.* Any such evidence submitted under 37 C.F.R. § 1.132 must establish what the specification would convey to one of ordinary skill in the art and cannot be used to supplement the specification. For example, in response to a rejection under 35 U.S.C. § 101, an applicant could submit a declaration under § 1.132 providing testimony on how one of ordinary skill in the art would interpret the disclosed invention as improving technology and the underlying factual basis for that conclusion.

Id. at 13 (emphasis added).

We disagree with Appellant's argument that the present claims recite an improvement to the data processing system by providing different weightings for hypothetical spans and specifically modifying the hypothetical sub-tree to remove any factual sub-tree prior to further processing. Appeal Br. 6–16 (citing *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327; *McRO, Inc. v. Bandai Namco Games Am. Inc.,* 837 F.3d 1299; *Finjan, Inc. v. Blue Coat Sys., Inc.*, 879 F.3d 1299; Spec. ¶¶ 24–30). We turn our focus to any evidence Appellant cites, as discussed in the October 2019 Update.

Here, Appellant refers to paragraphs 24–30 of the Specification. Appeal Br. 6–16 (citing Spec. ¶¶ 24–30). However, these alleged improvements are improvements distinguishing portions of text that are directed to actual factual statements and portions of text that include hypothetical descriptions, which falls within the category of an abstract idea,

as discussed *supra*, not an improvement to another technological field or the functioning of a computer itself. "[A] claim for a *new* abstract idea is still an abstract idea." *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1151 (Fed. Cir. 2016). "[U]nder the *Mayo/Alice* framework, a claim directed to a newly discovered law of nature (or natural phenomenon or abstract idea) cannot rely on the novelty of that discovery for the inventive concept necessary for patent eligibility . . . ." *Genetic Techs. Ltd. v. Merial L.L.C.*, 818 F.3d 1369, 1376 (Fed. Cir. 2016). Nor does Appellant's citation to the Specification (Appeal Br. 6–16) demonstrate that the problem to be solved is a technological problem, but rather is in the realm of distinguishing portions of text that are directed to actual factual statements and portions of text that include hypothetical descriptions in a manner that merely provides instructions to generic computer components operating in a generic manner. *See id.*; Spec. ¶¶ 40, 63, 91.

In this case, we conclude that the present claims do not recite an improvement to another technological field or the functioning of a computer itself, but rather amount simply to using generic computer components and operations to perform one or more abstract ideas.

With regard to Appellant's argument that the present claims recite a novel and nonobvious improvement to prior art computer mechanisms (Appeal Br. 8), Appellant improperly conflates the requirements for patent-eligible subject matter (§ 101) with the independent requirements of novelty (§ 102) and non-obviousness (§ 103). "The 'novelty' of any element or steps in a process, or even of the process itself, is of no relevance in determining whether the subject matter of a claim falls within the § 101 categories of possibly patentable subject matter." *Diehr*, 450 U.S. at 188–

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89; *see also Genetic*, 818 F.3d at 1376 (stating that, "under the *Mayo/Alice* framework, a claim directed to a newly discovered law of nature (or natural phenomenon or abstract idea) cannot rely on the novelty of that discovery for the inventive concept necessary for patent eligibility").

We disagree with Appellant's argument that the present claims are patent eligible because they recite the use of a specific machine that is not present within a general purpose computing device. Appeal Br. 18. The Specification indicates the additional elements (i.e., "processor," "data processing system," "memory," and "computing device") recited in the present claims are merely generic computer components used to implement the abstract idea. Spec. ¶¶ 40, 63, 91; *see also* MPEP § 2106.05(b) ("Merely adding a generic computer, generic computer components, or a programmed computer to perform generic computer functions does not automatically overcome an eligibility rejection.").

Appellant's arguments that the present claims do not preempt any abstract idea (Appeal Br. 18), do not persuade us that the claims are patent eligible. Although preemption may denote patent ineligibility, its absence does not demonstrate patent eligibility. *See FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1098 (Fed. Cir. 2016). For claims covering a patent-ineligible concept, preemption concerns "are fully addressed and made moot" by an analysis under the *Mayo/Alice* framework. *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015).

Appellant does not make any other arguments pertaining to Step 2A, Prong 2. Because the present claims recite an abstract idea that is not integrated into a practical application, we proceed to Step 2B.

F. *Step 2B*

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We disagree with Appellant's argument that the Examiner fails to
provide sufficient evidence to support the finding that the additional
elements implementing the abstract idea are well-understood, routine, and
conventional. Appeal Br. 18–19, 21–22 (citing *Berkheimer*). Notably, the
Examiner finds that the abstract idea is implemented with additional
elements that are well-understood, routine, and conventional and cites to the
Specification to provide sufficient evidentiary support. Ans. 4 (citing Spec.
¶¶ 33–34). Other paragraphs of the Specification also support the
Examiner's determination in this regard, because it explains that
"processor," "data processing system," "memory," and "computing device"
are generic computer components. Spec. ¶¶ 40, 63, 91.

An inventive concept "cannot be furnished by the unpatentable law of
nature (or natural phenomenon or abstract idea) itself." *Genetic Techs. Ltd.
v. Merial L.L.C.*, 818 F.3d 1369, 1376 (Fed. Cir. 2016); *see also* 84 Fed.
Reg. at 56; *Alice*, 573 U.S. at 217 (explaining that, after determining a claim
is directed to a judicial exception, "we then ask, '[w]hat else is there in the
claims before us?'" (emphasis added, brackets in original) (quoting *Mayo*,
566 U.S. at 78)). Instead, an "inventive concept" is furnished by an element
or combination of elements that is recited in the claim in addition to the
judicial exception and sufficient to ensure the claim as a whole amounts to
significantly more than the judicial exception itself. *Alice*, 573 U.S. at 218–
19 (citing *Mayo*, 566 U.S. at 72–73); *see BSG Tech LLC v. BuySeasons, Inc.*,
899 F.3d 1281, 1290 (Fed. Cir. 2018) (explaining that the Supreme Court in
Alice "only assessed whether the claim limitations other than the invention's

use of the ineligible concept to which it was directed were well-understood,

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routine and conventional" (emphasis added)).

We additionally disagree with Appellant's argument that the present claims recite a non-conventional and non-generic arrangement of known, conventional elements, which results in an inventive concept. Appeal Br. 19–21 (citing *BASCOM*). Appellant's arguments fail to identify any additional element or particular combination of elements that allegedly are unconventional, non-routine, or not well-understood. *See* Appeal Br. 19–21. We cite paragraphs in support of our finding that the generic computer components were well-understood, routine, and conventional components performing conventional computer operations. Spec. ¶¶ 40, 63, 91.

Moreover, in *BASCOM*, the claims were directed to "a filter implementation versatile enough that it could be adapted to many different users' preferences while also installed remotely in a single location." *BASCOM*, 827 F.3d at 1348–51. The inventive concept was "the installation of a filtering tool at a specific location, remote from the end-users, with customizable filtering features specific to each end user" that "gives the filtering tool both the benefits of a filter on a local computer and the benefits of a filter on the ISP server." *Id.* at 1350. Thus, when considered as an ordered combination, the court concluded the claims provided "an inventive concept can be found in the non-conventional and non-generic arrangement of known, conventional pieces." *Id.* Here, the present claims recite an abstract idea using additional elements that are generic computer components as discussed *supra,* in §§ D. and E. or at best, improving an abstract idea—not an inventive concept for the reasons discussed in §§ D. and E.

Appellant argues dependent claims 2–8, 12–18, and 21–23 separately.

Appeal Br. 26–29. Based on our review of the dependent claims, as discussed *supra*, these claims do not recite any additional features that would transform the abstract idea embodied in independent claims 1, 11, and 20 into an inventive concept. Accordingly, we sustain the Examiner's rejection of: (1) independent claims 1, 11, and 20; and (2) dependent claims 2–8, 12–18, and 21–23 under 35 U.S.C. § 101.

We have only considered those arguments that Appellant actually raised in the Briefs. Arguments Appellant could have made, but chose not to make, in the Briefs have not been considered and are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(iv) (2018).

CONCLUSION

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1–8, 11–18, 20–23	101	Eligibility	1–8, 11–18, 20–23	

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED